

**Before the  
Department of Commerce  
National Telecommunications and Information Administration  
and  
Department of Agriculture  
Rural Utilities Service**

**The American Recovery and Reinvestment Act of 2009  
Broadband Initiatives  
Docket No. 090309298-9299-01**

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**COMMENTS OF JAGUAR COMMUNICATIONS, INC.  
IN RESPONSE TO REQUEST FOR INFORMATION**

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## **Executive Summary**

### **Synopsis**

Jaguar Communications Inc. has attempted to create a coherent set of responses to the questions that have been released for comment by NTIA and RUS looking for guidance on certain aspects of the language and rules of the language contained within the ARRA.

A quick compilation of the answers is contained in this summary.

Jaguar believes that the categories of internet service provider, infrastructure provider, and telecommunications providers should be added to the eligibility list as a matter of rule by NTIA. We further believe that a set of rules should be forthcoming as expeditiously as possible and that the set of rules should be as objective as possible.

We believe that there must be gating guidelines to remove unsuitable applications that are distinct from the rating and scoring process. While all applications must be judged on a technologically neutral basis, we think that absolute speeds should be used as a gating mechanism, as the precedent has already been set with the FCC and RUS definitions of 200 kilobits each direction. Subsequent to the gating mechanism, we feel that higher speeds should score higher on applications within limits. We feel that speeds should be utilized in the definitions of unserved and underserved areas as well as further criteria that are outlined in our responses.

We feel that it is incumbent upon NTIA and RUS to lay out a set of guidelines that are both clear and concise that can be followed and adhered to without having a legal degree. We also feel that the internal processing guidelines for the agencies must be designed to provide rapid feedback and acceptance if the orderly processing and construction is to begin and end within the prescribed time frames.

We believe in public-private partnerships and we believe in open networks. We believe that local companies and organizations will provide the best networks available for their own areas as they live and work there. This vested interest will create immediate jobs as part of the construction and lasting jobs that will have an impact on the community. Economic impact to an area will be multiplied due to the continued presence of the local company in the community.

We believe that the agencies involved in the ARRA, specifically NTIA, RUS and the FCC are facing enormous challenges with both the BTOP and the expanded RUS authority but that these agencies can overcome the challenges by working with each other, the public and the program recipients. We remain ready to help or advise in any way possible.

We believe that it is time to streamline and overhaul old definitions and old processes. We believe that the people in these agencies are capable of rising to the challenge.

## ***Jaguar Communications, Inc. Background***

Since Jaguar Communications, Inc. (Jaguar) is a relatively small and unknown company, this first section is a brief introduction to Jaguar both to acquaint you with the company and to properly orient the focus of the comments that follow.

Jaguar Communications, Inc. is a small CLEC serving portions of rural Southern Minnesota. The company was founded in 1999 to bring advanced telecommunications services, including broadband, to the rural communities and farms of our serving areas. From that time to now, Jaguar has pioneered efforts to both advance the technology edge and to bring these advanced technologies and the higher associated broadband speeds into the communities we serve.

Jaguar began providing services under the provisions of the 1996 Telecommunications Act by leasing copper unbundled loops and utilizing these to provide DSL. We soon realized that this method of providing broadband service had limitations that were going to make it difficult to service the more remote portions of our service area. First, there are technology limitations with copper technology that basically trade distance for speed. No matter how good the copper is, there are inherent physical characteristics (Ohm's Law, capacitive and inductive impedance, as well as interference, among others) that limit the capacity of copper and there are also physical characteristics that increase the difficulty of maintaining good clean signals on copper (electrical conductivity, sensitivity to forms of radio frequency interference, and under-engineered plant facilities). Furthermore, in our case, these problems were exacerbated by the structure of the ownership of the facilities. While the Telecommunications Act of 1996 may have required the unbundling of network elements, the realities were still suboptimal from an operational standpoint. Plant could not be maintained nor repaired by the Jaguar technicians since it was owned by other companies. These companies had no interest beyond maintaining the plant to the minimum specifications required by both law and interconnections agreements. Since these agreements were specifically targeted at voice, the quality of the plant remained suboptimal. Therefore, Jaguar decided that the only way to provide real, meaningful broadband to the area was to own the facilities that were required to provide the services. To that end, Jaguar began testing various methods of delivery. The delivery mechanisms ranged from various forms of advanced DSL, wireless, air lasers, BPL, and fiber optic. In 2002, it was determined that the best network design in our service area, for our company, was to provide a complete fiber to the premise network with interim solutions that would utilize traditional DSL (including ADSL (and all of the enhancements of this format over the years), IDSL and MVL (both technologies to reach much longer distances on existing copper plant), SDSL, Point to Multi-Point wireless technologies, and BPON (an early fiber passive optical network). To gather the resources to provide this network, Jaguar first determined that there was indeed a demand in the service area for broadband and other enhanced services. Once demand was determined, Jaguar began the process of building the network throughout the service area. Today, the network consists of a mix of fiber, copper, and wireless working together to provide the fastest, farthest-reaching network in its portion of the state. It provides services that are in high demand at rational rates that are among the lowest in the nation for comparable services. The network

is run in an open manner that invites competitors and other service providers to provide services over the physical network with their own logical network. Currently, there are four providers that provide service on the fiber infrastructure that is owned by Jaguar.

One last view that I believe to be vital to understanding Jaguar. Jaguar is a corporation. However, it is owned by many local people that decided that they had to organize and support a local company to provide the services that would not be delivered for many years, probably decades, to our rural areas. The ownership is comprised of farmers, plumbers, mechanics, teachers, retirees, factory workers, ranchers, and small business owners; people from the community that believe in the community. Since the ownership is comprised of ordinary people that do not have large financial reserves, this company has had to operate without heavy losses. To that end, the company has operated at a small profit in each year since it began acquiring customers.

Thank you for taking the time to read the foregoing narrative and the program comments that follow.

April 13<sup>th</sup>, 2009

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***Topic 1 The Purposes of the Grant Program:***

Section 6001 of the Recovery Act establishes five purposes for the BTOP grant program:

- a. Schools, libraries, medical and healthcare providers, community colleges, and other institutions of higher education, and other community support organizations and entities to facilitate greater use of broadband service by or through these organizations;
- b. organizations and agencies that provide outreach, access, equipment, and support services to facilitate greater use of broadband service by low-income, unemployed, aged, and otherwise vulnerable populations; and
- c. job-creating strategic facilities located within a State-designated economic zone, Economic Development District designated by the Department of Commerce, Renewal Community or Empowerment Zone designated by the Department of Housing and Urban Development, or Enterprise Community designated by the Department of Agriculture;
- d. improve access to, and use, of broadband service by public safety agencies; and
- e. stimulate the demand for broadband, economic growth, and job creation.

a. Should a certain percentage of grant funds be apportioned to each category?

No. We believe that the idea of allocating specific portions of the grant funding to specific purposes misses the point of the objectives. The apparent disparate nature would at first glance seem to be difficult to achieve, but upon closer inspection, these goals are actually all complimentary. A well designed area-wide network meets each of these objectives by creating jobs, improving access to all stakeholders in an area including schools, libraries medical facilities, healthcare facilities, community colleges, any other institution of higher learning, public safety organizations, other governmental agencies, local, state, or federal as well as the people and businesses that are located in the area thereby stimulating both the supply and demand for broadband, growth and job creating within the area. Specifically allocating funds to only provide one of the listed objectives would appear to require duplication of facilities, exclusions of parts of the objectives in pockets, and an inefficiently built single purpose network that can not enhance the total and complete development within an area that we believe is the main thrust of the act.



b. Should applicants be encouraged to address more than one purpose?

Yes. We believe that a properly designed system will encompass most if not all of the goals of this program. While some rural or urban areas may not be part of an economic development zone individually due to the nature of the definition of these areas, they will be part of a larger area network build that would enfold the aforementioned zones. A properly designed broadband network will make access universal which means that it will be available at all locations to all entities including the ones mentioned under the listed points. Not only will it reach those entities but all of the other entities and stakeholders within the area will also have the potential to be served. By utilizing the grants to provide an area wide universal availability, the chicken and egg problem will be eliminated. The availability will spur new applications and usages that will spur increased demand. Further demand stimulation from portions of the BTOP itself will ensure that the demand side not only will happen but working with the supply side grants, that it will be able to be served from the supply side.

c. Leverage:

How should the BTOP leverage or respond to the other broadband-related portions of the Recovery Act, including the United States Department of Agriculture (USDA) grants and loans program as well as the portions of the Recovery Act that address smart grids, health information technology, education, and transportation infrastructure?

We believe that whenever possible, the programs should work together. However, there are some significant obstacles to this idea or the thought of requiring that various programs work together. There are many places where there are synergies that could be gained by different projects working together. These “cooperative projects” could see cost savings or greater enhancement to an area than if they were provided individually. We feel that it is incumbent on the grant recipients to search for these synergies and to utilize them when possible. We feel it is also incumbent on a grant recipient to cooperate with requests from others, whether other grantees, public projects, or private projects, to the extent possible, to implement a better total construction project or a better overall outcome for the area. Some examples of this type of cooperation would include building duct into all new bridges for future utility use, thereby lowering the cost of one of the most costly and difficult portions of utility building. We believe that universal broadband can and should be utilized with electric or gas companies to both help facilitate and manage the adoption of a smart grid. The problem with a requirement to implement all of the projects together however is quite simply time. Highway projects, bridge building, smart grids, and broadband builds all operate on different timelines. The broadband builds envisioned under this act must begin and complete within a very narrow time frame. The time required to effect engineering changes to the parameters on a section of road or a bridge could well take longer

than the entire time involved in the broadband construction. This does not mean it is not a good goal. It is simply a precaution about trying to do too much and achieving nothing.

## ***Topic 2. The Role of the States:***

The Recovery Act states that NTIA may consult the States (including the District of Columbia, territories, and possessions) with respect to various aspects of the BTOP. The Recovery Act also requires that, to the extent practical, the BTOP award at least one grant to every State.

Section 6001(c) states that the Assistant Secretary may consult a State, the District of Columbia, or territory or possession of the United States with respect to--

- (1) The identification of areas described in subsection (b) or located in that State; and
- (2) the allocation of grant funds within that State for projects in or affecting the State.

### **a) How should the grant program consider State priorities in awarding grants?**

The NTIA and the Assistant Secretary must and should comply with the legislative language. With this in mind, we feel that they should consider the input from a state but should neither be bound by that input nor should that input be used for anything further than breaking a tie in the grant scoring. While it is true that the state government is closer to the locale than the federal government, it has less chance of remaining objective in its selection criteria than the NTIA. Whatever role the states are granted, we feel that since NTIA is a branch of the Department of Commerce, that the states should be represented by the same agency at the state level, the state Department of Commerce.

### **b) What is the appropriate role for States in selecting projects for funding?**

This question poses many problems. Not least among these are the varying degrees of expertise that the different states possess. Even when the states are engaged in the current process, they often have less understanding of the entire process including the funding, design, ongoing operations, and competitive natures of various entities involved in the various processes. Many states do not have good basic understandings of the basic tenants of broadband creation and implementation, others have strong backgrounds in many aspects of the industry but lack the operational knowledge to utilize the network to its best advantage.

Furthermore, states have many varied and vested interests that have little to do with the mandates of this legislation. There are many lobbying efforts aimed at state government. The larger the entity, the larger the influence. This can have a disproportionate influence in more rural or disadvantaged areas. They also have come under intense budget pressure

during the economic downturn, causing many of them to scramble for funds to fill holes in their state budgets. These funds may be seen as a way to stem some of the gaps even though they will not advance the economic well being of the state as a whole, but rather agencies and departments of the state.

There are also the difficulties presented by the states method of selecting projects. In our state, Minnesota, there was an initial push to register projects. The state's high speed task force contacted a few entities randomly to solicit projects. These projects were put on a list. There has never been a formal solicitation nor has there been a concerted effort to actually find the projects that are ready to be built that would be consistent with the aims of this legislation.

While there are many areas of the state that are unserved or underserved, no matter the definition that will eventually be used, we do not feel that the state actually has a firm grasp on what this means nor do we feel that they have any plan or activity to solve this.

For these reasons, we would suggest that the states role in selecting individual projects be extremely limited. We feel that the companies like ours that may be concerned about the states lack of objective-driven selection criteria or processes will be at a disadvantage should the states participate in the BTOP selection process on a project by project basis. The ARRA mandate dictates expeditious implementation of BTOP, based on the fundamental goals of economic recovery and advancing broadband objectives to the public good on an accelerated basis. Time is of the essence here, and requires centralized organization, procedures and processing, once implementation policy is guided with the benefit of public comment, including input from state government. The Act does not contemplate BTOP as a bloc grant program adding another layer of administration, nor should it be transformed into one.

For these reasons, we would suggest that the states role in selecting projects be extremely limited. We feel that the companies like ours, that may be critical of the states selection criteria or processes will be at a disadvantage when it becomes time for them to make selections. We feel that the disadvantage may be so large that not only would we not be selected or approved but that we might be "de-selected" based on this one factor alone.

#### c) Funding Priorities?

How should NTIA resolve differences among groups or constituencies within a State in establishing priorities for funding?

This is a question that we have wrestled with inside of our company and in each individual's own mind. The only guidance that we feel that we can offer here is that each project must be weighted on the merits of its compliance as a whole instead of its benefit for a particular purpose or category of user . We feel that any project that only benefits public safety or only benefits libraries or only benefits consumers or only benefits education does not provide sufficient justification under this legislation to be approved, or at best, should fall lower on the scale of priorities. The idea would be to look for holistic approaches that benefit an area, including all stakeholders in the area.

d) Worthwhile and measurable results?

How should NTIA ensure that projects proposed by States are well-executed and produce worthwhile and measurable results?

There are two ways to read this question and we are unsure of the agencies intent so we will answer both ways.

First, if the state is making a proposal and grant request for themselves (since they are eligible for funds themselves), we feel that it should have to meet the same requirements as any other entity, including the scoring and ranking of the project. If they are subject to the same criteria, those projects would of necessity, have to be worthwhile and measurable, the same as any other project. To ensure the execution of this type of project is much more problematic as governments as a whole do not possess the internal experts to validate the designs and the quality of the work. However, consultants could be hired to provide this oversight just as they will need to be in many other instances. It is difficult to believe that there will be “worthwhile and measurable results” from a single purpose network that does not include applications and usability for all of the concerned stakeholders.

If the other interpretation of this question is answered, (How does NTIA ensure that any list of projects presented by a state are well-executed and produce worthwhile and measurable results?) we do not believe that the states should be able to propose a list of projects for other entities that NTIA should use as more input than as a tiebreaker. The other eligible entities should be able to process their own projects and must be accountable for them in the same manner as all other applicants. If we are truly using this to fulfill its legislative mission, we have many different areas to work with. Since the ability of the states to decide which projects get funded was expressly removed from this legislation, we do not believe that there is an intent for them to be more involved in this process nor do we feel that they should shape the projects that will hopefully be a precursor to a national broadband plan that will be developed during the course of time and from the crucible of the experience gained from the BTOP program.

***Topic 3. Eligible Grant Recipients:***

The Recovery Act establishes entities that are eligible for a grant under the program. The Recovery Act requires NTIA to determine by rule whether it is in the public interest that entities other than those listed in Section 6001(e)(1)(A) and (B) should be eligible for grant awards. What standard should NTIA apply to determine whether it is in the public interest that entities other than those described in Section 6001(e)(1)(A) and (B) should be eligible for grant awards?

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Section 6001(e) states that eligible applicants shall--

(1)(A) Be a State or political subdivision thereof, the District of Columbia, a territory or possession of the United States, an Indian tribe (as defined in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450(b)) or native Hawaiian organization;

(B) a nonprofit--

(i) foundation,

(ii) corporation,

(iii) institution, or

(iv) association; or

(C) any other entity, including a broadband service or infrastructure provider, that the Assistant Secretary finds by rule to be in the public interest. In establishing such rule, the Assistant Secretary shall to the extent practicable promote the purposes of this section in a technologically neutral manner \* \* \*.

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Jaguar is pleased by the fact that so many entities were included in the language of the bill and the ensuing law. In various areas, different needs and market conditions will help decide what type of entity is needed to provide broadband. Jaguar does not feel that it is the place of government to displace private business but it does feel that there are areas that will be overlooked or left alone if local governments are not allowed to take a hand in building their own future. We feel that public private partnerships are an important part of the future of broadband. Especially as it pertains to fiber, the physical network is very much a natural monopoly, just like a road or a river. To create the initial network is very important. Allowing others to utilize it at fair rates and terms is an important concept that we believe in. When more grain needs to be hauled down the Mississippi river, no one would think about dredging a new river. Instead, someone would buy a barge and haul grain in their own barge, paying the same as others did to use the river, whether the cost is in licensing, use fees, gas taxes, tolls, or whatever other mechanism would be in place. They would have the same rules and regulations that others on the river would have but they could determine their own price and schedule.

Jaguar feels that it is particularly important that the Assistant Secretary find that various forms of private business, especially existing broadband services and infrastructure providers be found to be "in the public interest". These entities are already versed in the construction and maintenance of the broadband networks in question. This will lead to a more rapid deployment in the short term and to a much higher probability of the network being sustainable in the future without further support or funding of those network pieces.

#### ***Topic 4. Establishing Selection Criteria for Grant Awards:***

The Recovery Act establishes several considerations for awarding grants under the BTOP. In addition to these considerations, NTIA may consider other priorities in selecting competitive grants.

Section 6001(h) states that NTIA, in awarding grants, shall, to the extent practical--

(2) Consider whether an application to deploy infrastructure in an area--

- a. Will, if approved, increase the affordability of, and subscribership to, service to the greatest population of users in the area;
  - b. will, if approved, provide the greatest broadband speed possible to the greatest population of users in the area;
  - c. will, if approved, enhance service for health care delivery, education, or children to the greatest population of users in the area; and
  - d. will, if approved, not result in unjust enrichment as a result of support for non-recurring costs through another Federal program for service in the area;
- (3) consider whether the applicant is a socially and economically disadvantaged small business concern as defined under section 8(a) of the Small Business Act (15 U.S.C. 637).

a. What factors should NTIA consider

in establishing selection criteria for grant awards? How can NTIA determine that a Federal funding need exists and that private investment is not displaced? How should the long-term feasibility of the investment be judged?

This series of questions addresses several different independent evaluations.

1. Jaguar chooses not to comment on what criteria should be used beyond those established by the Act, since we would benefit if our suggestions were chosen. However, we would like to state that we feel it is very important to make the criteria as objective as possible. This will ensure getting more complete applications, that require less review time and less time spent in questions and answers for things that one would hope were in the applications. While it is undeniable that some applicants will be looking for “free money”, we believe that the vast majority of the applicants will be have valid projects with sincere desires to provide a valuable service to their community(ies).

2. We feel that the public versus private funding question is one of the more straightforward questions to assess. If the private capital were available, it is unlikely that the applicant would be applying for this program. Government programs tend to be slow, bulky, and add additional cost to a process. However, the lure of “free money” will draw out people that are always looking for a free lunch.

One of the objective measurements that can be seen is the amount of cash on the balance sheet. Since a project like this would normally require at least 50% or 60% cash down, or at the very least, that amount of asset base, companies with less than that amount available would likely be unable to obtain money from other capital sources. Since the bubble of 2000, it has been increasingly difficult to obtain capital for this type of investment. After the banking crisis, it is even more difficult as most banks are unwilling or unable to loan large sums on “infrastructure” since it cannot be readily disposed of and most banks do not have the specialists on staff to fully understand the industry. The financial understanding required of these institutions is further complicated by the mishmash of regulation, regulated companies, non-regulated companies, and partially regulated companies along with varying regulatory control between federal, state, and local regulatory bodies.

3. We are not sure if the question re long term feasibility is being asked properly. Is it the long term feasibility of the investment or the long term feasibility of the project? We are quite sure that the investment can be feasible long term. We do believe that the long term feasibility of the project, especially as it relates to the operations, the return on investment, both financially and socially needs to be assessed. For the first portion, if there is an entity that is doing this successfully at the moment, without subsidization, and they are able to put together a business plan that more or less mirrors their current operation, that is financially stable, that would appear to satisfy the requirement. On the other hand, if they do not have such a history or are not in the industry, we believe that this area is one of the largest areas of concern. The ongoing costs of a broadband network can overwhelm even the most careful planning if the people doing the planning are not familiar with the ongoing costs. Each type of network has its own advantages and disadvantages. In general, the more a type of network costs to build, the lower the maintenance and upkeep are on the network. Many people look to wireless as a panacea for the shortage of broadband but the reality is that the ongoing Operation Expenses (OPEX) costs are significantly higher than for fiber. This is not meant as a condemnation of copper or wireless networks, just the realization that there are varying ongoing costs and that factor will affect the long-term viability of the project.

b. What should the weighting of these criteria be

in determining consideration for grant and loan awards?

Jaguar chooses not to comment on the weighting of these criteria since we would directly benefit if our suggestions were chosen.

c. How should the BTOP prioritize proposals that serve underserved or unserved areas?

Should the BTOP consider USDA broadband grant awards and loans in establishing these priorities?

Yes, NTIA should consider USDA grants and RUS loans as a priority because it (1) allows BTOP grant funds to support broadband build out to additional contiguous areas that are underserved, but did not meet USDA criteria for unserved/underserved. This will allow leveraging of BTOP funds on the basis of prior USDA funding, i.e. costs will be significantly incremental in nature resulting in more bang for the buck; and (2) allows NTIA to pre-screen BTOP grant recipients based on performance results of USDA grant/RUS loan recipients.

d. Should priority be given proposals that leverage other Recovery Act projects?

While this is certainly an option and in our opinion a way that might better utilize some of the funds, there are several problems with this idea that should not be allowed to block good stand-alone projects. Where there are synergies that can be utilized or encouraged, this is a good thing. However, due to the extremely compressed time frame for the awarding of the funds and for the completion of the projects, especially the initial rounds, it is not likely that a lot of the synergies could be realized without tremendous cost, thus offsetting whatever benefits might exist.

e. Should priority be given to proposals that address several purposes.

serve several of the populations identified in the Recovery Act, or provide service to different types of areas?

The purpose of the act appears to cover several different types of projects and processes. While many of them are complimentary, it is not a necessity to have all of the pieces covered to have a good project. We do feel that a project that has all or even most of the points covered should have a preference of some type. This could possibly be done by having a part of the scoring mechanism being give to this category. Maybe 1 point for each portion that is utilized, possibly up to 5 points if all of the purposes are covered.

f. What factors should be given priority

in determining whether proposals will encourage sustainable adoption of broadband service?

No matter what the government chooses to believe, the rate of adoption and its sustainability is not the issue. Broadband is adopted because people want it. When they do not, it is not purchased. While it may be true that the very poorest of the poor cannot afford broadband, it is probably a much deeper problem at that time. For less than the cost of a cup of coffee, broadband in some way shape or form is available in many places but the adoption rate in those areas is not appreciably higher than it is in areas where it costs more. If that cost is really the delimiting factor, that will have many other implications such as the cost of a computer or other access device, and the cost of electricity or batteries to operate the device.

There are a few factors that we believe would stimulate demand from the people who choose to not adopt. One would be the cost of the installation. Over the course of time, we have found that installation costs are one of the biggest hurdles to overcome. To that end, we have reduced those costs to as little as zero and have seen an increase in adoption both immediately upon availability and over time. For the marginal consumer, implementing some type of a program such as “Life Line” in the telecommunications world to subsidize the monthly cost might have some benefit. There is a benefit to having public access. Once people find out what they can do with broadband, there is an increased appreciation for the service and that leads to a greater desire to have it themselves both for ease of use and for time saving reasons. The last factor that we can think of would be to provide a computer for access. With the tremendous amount of money available to stimulate demand, some of the funds could be utilized to provide new computers to consumers that met certain income guidelines. This could be utilized in conjunction with all approved applications.

g. Considering Different Technologies

Should the fact that different technologies can provide different service characteristics, such as speed and use of dedicated or shared links, be considered given the statute's direction that, to the extent practicable, the purposes of the statute should be promoted in a technologically neutral fashion?

The wording of the act leaves no doubt about remaining technologically neutral. While as a technologist, I have difficulty with this concept, the reality is that any good project can and should increase broadband availability and its adoption. However, there are also clear indications in the act that talk about upgradeability, higher speeds, and cost benefit



analysis. While these may seem to have contradictory messages, they can be sorted to some degree. Fiber optic cable has the highest available speed, both currently and into the foreseeable future. Fiber optics also have the easiest upgrade path of the fixed line types of projects (Fiber optic, Copper, or Coaxial). Wireless is also easily upgradeable but it has a much lower economical bit rate speed. Coaxial and copper plant are also upgradeable but the upgrade path for these mediums is fast reaching completion. In general, all applications except for fiber, trade distance for speed. This inherent limitation of copper and coax makes them a short to medium term solution. However, even this is a tradeoff as broadband on existing copper or coax is arguably cheaper than even wireless. What all of this means is not certain, but the best way that we can interpret it is that copper, coax, and wireless all cost less but have more limited upgrade potential, lower speed, and higher cost per megabit compared to fiber. Fiber has the advantage in everything except initial cost of deployment. Fiber also would seem to create the largest number of short term and sustainable jobs. With these thoughts, we would suggest that NTIA and RUS use a devised point system to rate grant applications on a project basis that is technologically neutral. Of course, some technologies will score better in some areas than others, but that is not the point. There is not one single technology available today that will score the highest on EVERY category. The various categories that are used to score the grant or loan should be enough to evaluate projects, not technologies. This project evaluation may lead to more projects being awarded to one type of system and less to another type. However, we see no problem with that. There is no mandate to make equal numbers of projects for each technology but rather to remain neutral. It would seem to us that this requirement is more about not overtly leaving out good projects regardless of the technology rather than taking bad projects because of the technology.

h. What role, if any, should retail price play in the grant program?

We do not believe that retail price should play much if any role in the grant process. Price is going to be dictated by market mechanics as the adoption of broadband continues to accelerate. We would warn about creating artificially low prices by fiat. There are two main reasons for this. The first is that the long term viability and sustainability of a project could be impaired if prices are too low. The second is that prices that are too low will have less cash flow. Lesser cash flow will impede the continued deployment of broadband through reinvestment of the proceeds. This reinvestment of cash flow is an important part of the stimulus. We feel that it would be much better for the program and for the country if there were a reinvestment clause in the contracts rather than artificially low prices.

***Topic 5. Grant Mechanics:***

The Recovery Act requires all agencies to distribute funds efficiently and fund projects that would not receive investment otherwise.

a. What mechanisms for distributing stimulus funds should be used

by NTIA and USDA in addition to traditional grant and loan programs?

Traditional grant and loan programs are a great start and are sure to boost spending on plant and the associated labor involved in building the plant. We would also advocate a loan guarantee program that guarantees 100% of the first 60% of the loan amount such as the one that has been brought forward by the Rural Fiber Alliance.

There is one other thought that we have here. It was brought up during the live meetings and comment period that NTIA felt it would be a bad idea to cover 100% funding because less applicants would be able to receive funding and that would mean less places would get broadband. At the time, I completely agreed with that thought. However, after having a fair amount of time to think things over, there are ways to do both. If a grant were awarded for seventy-five percent (75%) and a loan guarantee was placed on the other 25% of the loan, (possibly by RUS since it is unclear if NTIA has the authority to provide loan guarantees) there would actually be less funding being drawn but the applicant could receive the total amount that they would need for a project. This would also get some of the private capital money moving again. This could lead to good financing experiences between the company receiving the entity receiving the funding and the financier thereby allowing more capital to flow more freely in the future.

**b. Addressing Shortcomings**

How would these mechanisms address shortcomings, if any, in traditional grant or loan mechanisms in the context of the Recovery Act?

The programs themselves are not necessarily the problem. The problems comes about in the application, the evaluation, and the distribution mechanics. Each of these processes is extremely slow, often redundant, with rules that are both obscure and outdated. The time involved in the processes would have put any bank or other financial service out of business simply because they would have not been able to retain any customers. However, since it is a government program, it has the advantage of a low cost of money and an unlimited budget . The people involved in the processing of the applications and disbursements work hard but have their hands tied by the Byzantine rules that utilize processes and notions that are unheard of in the business world that is post 1945. Unique accounting principles and continued re-analysis add to the complexity and time requirements throughout the life of the loan, even through disbursement. Cash release delays of weeks to even months cannot be allowed under this Act if there is to be any chance of a project completing within two years. Disbursements must be made in a timely fashion without a complicated, time consuming, review process, subject to agency auditing of course.

***Topic 6. Grants for Expanding Public Computer Center Capacity:***

The Recovery Act directs that not less than \$200,000,000 of the BTOP shall be awarded for grants that expand public computer center capacity, including at community colleges and public libraries.

**a. What selection criteria should be applied to ensure the success of this aspect of the program?**

This aspect of the program does not appear to be so difficult. Since the only criteria stated in the law is to expand public computing center capacity, this would appear to be the main criteria. Further criteria could be that all of these institutions are allowed up to so many machines until the money is completely spent as long as the computers are used for public access AND that older machines are either kept in service or given to people that do not have any computer.

b. Additional Eligibility for Institutions

What additional institutions other than community colleges and public libraries should be considered as eligible recipients under this program?

There are a few that might be considered here. Any type of non-profit community center that allows access to the public to utilize the machines on a regular schedule of more than 20 hours a week. A few that come to mind would be staffed community centers, boys and girls clubs or other youth activity centers, senior centers, and possibly even homeless shelters. Not only do these locations provide public access, but many of them cater to the low-income, unemployed, aged, and otherwise vulnerable populations mentioned in other parts of the Act.

***Topic 7. Grants for Innovative Programs to Encourage Sustainable Adoption of Broadband Service:***

The Recovery Act directs that not less than \$250,000,000 of the BTOP shall be awarded for grants for innovative programs to encourage sustainable adoption of broadband services.

a. What selection criteria should apply to ensure the success of the program?

This is an interesting and difficult section of the act. The first thing that we see here is that the people that framed this language did not really have any idea on how to do this, hence the “innovative programs” language. While we do not really know what these “innovative programs” are, and hence we do not know how to select them, what we do know is that there are three main reasons why people do not purchase broadband. The first one is lack of availability, the second one is economics, and the last one is lack of familiarity with the benefits. These three reasons are actually tied together in many ways. While it may be obvious that people cannot adopt broadband where there is no availability (supply), it leads to the lack of familiarity with the product leading to lower demand leading to low supply in an endless cycle. Where the economics are poor, there does not appear to be a demand that would drive the supply side. Poor economic conditions mean that people do not have the method to gain familiarity. While training and classes may provide some measure of familiarity, if there is a problem with either the supply or the economics, there will still not be a demand. One possible method to combat these cycles would be to subsidize the initial experiences of people new to computing and the internet. This could be done through a combination of 3-6 months of paid internet broadband services, a free PC setup to access the service, and a few hours of individualized training coupled with some community based group training to at least allow some basic familiarity with both computers in general and broadband internet in particular. It might be possible to tie these group training sessions to the “increased public computer capacity” required under the preceding questions and the distribution of the PC and service through the supply side recipients to make an effective distribution and training mechanism. These are not necessarily recommendations but rather our thoughts that may help you devise or evaluate programs or criteria.

b. What measures should be used

to determine whether such innovative programs have succeeded in creating sustainable adoption of broadband services?

The only way that we can see to “measure” the effectiveness of these programs would be through reporting and statistical analysis of the results. In some cases, it may be relatively simple to quantify (as in the example above) by doing surveys in 12 months or 24 months to see if the people enrolled in the programs really did adopt broadband as a service or if it was only temporary through the program requirements. In other cases, such as an awareness campaign, the only measurement may be in statistical analysis of the overall usage rate compared to other areas. Measurement of sustainability should be observable through trend analysis of the cooperative NTIA and FCC data gathering and mapping (see below).

***Topic 8. Broadband Mapping:***

The Recovery Act directs NTIA to establish a comprehensive nationwide inventory map of existing broadband service capability and availability in the United States that depicts the geographic extent to which broadband service capability is deployed and available from a commercial provider or public provider throughout each State.

a. What uses should such a map be capable of serving?

This type of map could serve several uses. We feel that the map should show what services are available at a location, including company, mode of delivery, and possibly speed. If those informational items were included, consumers would be able to find providers and have some idea of the service available as they move into an area or decide to adopt broadband. It would make it easier for them to gather that information as it would all be in one place. Government agencies could utilize this map and the corresponding database information to make meaningful decisions based on real data that could lead to furthering the national broadband agenda and reporting on the progress of same.

b. What specific information should the broadband map contain,

and should the map provide different types of information to different users (e.g., consumers versus governmental entities)?

We feel that the map should show what services are available at a location, including company, mode of delivery, and possibly speed. The reason that we state possibly speed and we do not mention price is that both of these parameters change continually and it would be difficult to keep the information current. However, if there were speed testing being done from the consumer themselves, the highest level of reported speed could be included in that manner. These types of speed maps are fairly common on the internet and could be adapted to this situation. The biggest problems with maps that we have seen and would hope to avoid is grouping of data into blocks; zip codes, census tracts, or any other grouping that falsely inflates the number of locations servable by broadband. Wireless also has this effect as it is generally drawn in a circle and it does not actually include everyone in that circle. Copper plant also has drawbacks in this manner since sometimes

plant is unusable even within its prescribed distances due to poor plant or pair shortages. Having discussed some of these concerns with the people that are doing the Minnesota mapping under the Connected Minnesota program, they appear to be taking these factors into account and doing a good basic map of the state. We do not feel that public (e.g. consumers) or the government have a significant differing need for the type of information.

c. At what level of geographic or other granularity

should the broadband map provide information on broadband service?

As previously stated, we feel that the granularity needs to be at an address level. Any other level distorts the actual availability and it is always distorted too high. This often discourages or prohibits new services from being introduced.

d. What other factors should NTIA take into consideration

in fulfilling the requirements of the Broadband Data Improvement Act, Public Law 110-385 (2008)?

We feel that \$350,000,000 is much too expensive for this process. This is not an uncommon feeling among service providers or even among the vendors that may be applying for these funds. If these funds are not all required here, it would allow for some of them to be utilized to either fund more grants or to fund the loan guarantees that were mentioned in earlier comments. The one other thing to note here is that the maps continue to change and will continue to change into the foreseeable future. We feel it is important to come up with a way to continue to map broadband coverage beyond the term of the stimulus package to maintain and update the information on an on-going basis.

e. Are there State or other mapping programs that provide models

for the statewide inventory grants?

Even though there are some problems with some of the Connected Nations maps, especially with data collection and coverage areas, these mapping efforts show a template that might work well for a national initiative. The problems could be reduced greatly if the scale and scope of the project matched the timeline and provided for a sufficient amount of time to complete the project. They also have the ability to provide, or the ability to integrate such a system into their maps, a “self-reporting” consumer driven speed test database.

f. Specifically what information should states collect as conditions of receiving statewide inventory grants?

States should collect, at a physical address level, method of delivery, company delivering (or capable of delivering) services, current speeds offered, and current speeds supported. Even though the speeds offered and supported will be changing often, it will help give a snapshot of the overall US picture of broadband.

g. What technical specifications should be required of State grantees

to ensure that statewide inventory maps can be efficiently rolled up into a searchable national broadband database to be made available on NTIA's Web site no later than February 2011?

At the very least, they must enter their information into a database that will work with a GIS overlay. This type of technical solution is readily available and will make it easier to work with data either statistically, generally, or in a graphical format. Each of these grantees should be required to utilize software that has a minimum requirement of providing all of the information in a standard output that will roll into the national database.

h. Should other conditions attach to statewide inventory grants?

This is not our area of expertise but we feel that this information should be made available on the web as it is collected and formatted into viewable information.

i. What information, other than statewide inventory information,

should populate the comprehensive nationwide map?

While there are many types of information that could populate a national map, wouldn't you want all of the same things on a statewide map which would require minimum uniform inventory information at the state map level?

j. How should NTIA and FCC best work together?

The Recovery Act and the Broadband Data Improvement Act (BDIA) imposes duties on both NTIA and FCC concerning the collection of broadband data. Given the statutory requirements of the Recovery Act and the BDIA, how should NTIA and FCC best work together to meet these requirements?

The FCC has recently begun requiring reporting that masses customer information by census tracts. While this information may have some use, it is often less granular than zip codes, especially in rural areas. If the two agencies were going to cooperate and utilize each others information, it would seem that this type of reporting would be redundant and that this type of reporting could be stopped. This would mean that providers would have to fill out fewer forms. Instead of filling out forms, allow providers to provide the address level information that they have in an electronic format instead of requiring forms be filled out. The reporting could also include general product and price information for larger areas, like an exchange or a county so that individual privacy concerns were not raised. There could also be a report that would list the maximum speeds that can be achieved with the physical plant and hardware platform combination that is deployed in one of these larger geographical areas. If this were to be done on an annual basis, it could keep the general pricing, speed offered, and possible speed models updated so that information could be refreshed on the NTIA maps thus allowing both agencies to have a better view of the data.

***Topic 9. Financial Contributions by Grant Applicants:***

The Recovery Act requires that the Federal share of funding for any proposal may not exceed 80 percent of the total grant. The Recovery Act also requires that applicants demonstrate that their

proposals would not have been implemented during the grant period without Federal assistance. The Recovery Act allows for an increase in the Federal share beyond 80 percent if the applicant petitions NTIA and demonstrates financial need.

a. What factors should an applicant show to establish the "financial need" necessary to receive more than 80 percent of a project's cost in grant funds?

We believe that unless there is a way to utilize a guarantee program either through the NTIA program alone, or in conjunction with RUS, that there should not be grants greater than 80%. This will allow the maximum number of projects to be funded with the greatest benefit accruing to the nation, both through jobs created and through the largest possible area served. If a project could receive both a grant, and a loan guarantee on the same project, they could receive a 75% grant and a 20 or 25% loan guarantee. This would allow for the entire project to be funded but the cost to the government would actually be lower than it would for an 80% grant. As mentioned earlier, this could have longer term implications in opening private funding as well as ensuring that deserving projects did get completed in the short term.

We also believe that having the matching funds requirement will cull poor business plans, and require some other type of financial scrutiny thereby helping the NTIA and RUS by having built in reviews by third parties.

b. Factors for less than 80% Federal share.

What factors should the NTIA apply in deciding that a particular proposal should receive less than an 80 percent Federal share?

We believe that all projects that are deemed worthy through the application and scoring process should receive the full 80% Federal share. The sole exception to this would be for applications that were deemed to be worthy of greater than 80% as mentioned above in question a.

c. Demonstration of non-implementation requirements

What showing should be necessary to demonstrate that the proposal would not have been implemented without Federal assistance?

This is a complicated question. The requirement for shovel-ready and the idea of non-implementation are almost the antithesis of each other. However, there are many projects that have been planned but are sitting on the shelf for lack of funding. There are also plans that have been planned that were pulled back once talk of the stimulus began. We see no way to reasonably tell the two different scenarios apart. There are also going to be projects that have been designed since talk of the ARRA began with the realization that they might now be able to implement the plan with the stimulus funding. While it may be quite easy to demonstrate that larger projects were not feasible without this type of funding, it becomes increasingly harder to "prove" that as projects get smaller. All businesses, large or small, currently have at least some level of difficulty when it comes to financing projects in general. The tightening capital markets have made traditional financing more challenging than it has been in many years. The old saw that states "if the project is worthwhile, financing will be available" is no longer true. With these thoughts in mind,

we are not sure there is an actual answer. One question, “Would the entity have a realistic way to fund this project through a different source?” might prove helpful. If the answer is no, the project would most likely not have been able to be implemented. There may be measurements that could be used to at least guide the agency although we are unsure what they might be.

### ***Topic 10. Timely Completion of Proposals:***

The Recovery Act states that NTIA shall establish the BTOP as expeditiously as practicable, ensure that all awards are made before the end of fiscal year 2010, and seek assurances from grantees that projects supported by the programs will be substantially completed within two (2) years following an award. The Recovery Act also requires that grant recipients report quarterly on the recipient's use of grant funds and the grant recipient's progress in fulfilling the objectives of the grant proposal. The Recovery Act permits NTIA to de-obligate awards to grant recipients that demonstrate an insufficient level of performance, or wasteful or fraudulent spending (as defined by NTIA in advance), and award these funds to new or existing applicants.

#### **a. Best Method of Implementation**

What is the most efficient, effective, and fair way to carry out the requirement that the BTOP be established expeditiously and that awards be made before the end of fiscal year 2010?

The ideas that we have been hearing both at the hearings and on the street of multiple application periods sounds more than reasonable. This will allow some of the projects to begin expeditiously while others that need time to gather application materials will have that time. It will also help the agencies by spacing the applications instead of getting thousands in one large group. With the worsening economy, it would seem to be the goal of this program to actually have projects being built in 2009. To make that happen, awards must be given before the end of the summer with immediate funding availability or draw-downs to begin construction yet in 2009. There are projects ready to go in that time frame and these should be selected, approved, and funded as quickly as possible. The application process should be as objective as possible, with some type of a scoring system in place that has as many objective measurements as possible with fewer subjective portions. This will both enable quicker evaluations and remove a large degree of uncertainty.

While there are some problems with the RUS application process, it is not necessarily in the application process itself. Some forms are freeform which results in a more difficult process in filling it out as well as evaluating it. Some information may be too detailed and some may be irrelevant. However, it is a fact that the RUS application process is already documented reasonably well and that there are guides available to help fill in the blanks. Utilizing this as a starting point would at least give some basis for filling out applications and for understanding what information is required. Even if the NTIA and or RUS would like to use a simpler format, by validating the current RUS format, it would allow some applications to be completed in a much quicker time format by those that wanted to begin quickly.

Jaguar also believes that there should be either an annual or semi-annual drawdown of the funds at the beginning of the period to cover the projected costs of the ensuing period.



This amount should be consistent with the amount projected to be used in the period and the funds should be issued within 10 days of request. This will allow for a smoother building process and help projects stay on their timelines. If the funds are not allocated that quickly, many projects will fall behind simply because the funding that is to be used to build the projects is not available. A full progress report should be required with each drawdown to help ensure that the project is on track and that funds are being spent efficiently and in an approved manner. These reports could be part of the quarterly reporting that appears to be required and this combining of reporting would both lower overhead for the entity and also lower the follow-up overhead for the government.

**b. Timely Implementation Elements**

What elements should be included in the application to ensure the projects can be completed within two (2) years (e.g., timelines, milestones, letters of agreement with partners)?

Letters of agreement from partners, vendors, and contractors would all be valuable. Jaguar has already reached out to all of these people with the idea that we will need them to adhere to timelines if we are to both apply and live up to the obligations that a successful application entails. Timelines and milestones may be valuable but they must have some amount of leeway in a process like this due to weather and even the timing of the acceptance. If a project were to be approved for Northern Minnesota in August and funds were available to start in September, the timeline might look like the following: break ground in October and work 6 weeks on construction, resuming in May of the following year. If instead, that approval was given in November, there would not be any construction that could happen until the following May, or even June depending on the weather. Without knowing when the project would have money available to begin construction, it is difficult to provide a meaningful timeline. On the other hand, it is not that difficult to give a construction timeline that would be measured in working months. The only issue then is where the non-working months get inserted.

One thing we would suggest here is to have forms or examples available to speed up the process. If you do not, there will be a plethora of free form applications all trying to give you the information that the applicants believe you need in a form that they believe is useful. This will lead to a longer evaluation period since each application will “look” different even if they all contain the required information. This can make evaluations take longer simply due to the time spent looking for the various pieces of information contained in the application. It can also frustrate applicants and stymie the program if a large number of applicants fill out what they believe that you want only to find that what they thought and what you wanted were two different things. These false starts are terribly frustrating to go through and having to start over is a very disheartening experience.

***Topic 11. Reporting and Deobligation:***

The Recovery Act also requires that grant recipients report quarterly on the recipient's use of grant funds and progress in fulfilling the objectives of the grant proposal. The Recovery Act permits NTIA to de-obligate funds for grant awards that demonstrate an insufficient level of performance, or wasteful or fraudulent spending (as defined by NTIA in advance), and award these funds to new or existing applicants.

- a. How should NTIA define wasteful or fraudulent spending for purposes of the grant program?

Wasteful spending could be defined as spending grant funds on a project or portions of a project that exceed industry standards by a percentage amount. It could also include spending that does not directly or indirectly advance the purpose of the grant.

Fraudulent spending should be defined as spending that does not directly or indirectly pertain to the project or that is willfully spent on non-grant objectives .

We feel it is important to list all applicable or non-applicable purposes to which this funding should be spent. Since a large portion of this money will be spent on capitalized labor, we feel it is necessary to either list all of the applicable jobs and job types that would qualify and those that would not qualify. An example of this might be a direct sales person. Is that labor used to sign up a customer a qualifying capital expenditure or is it a part of operational expense? What about the labor to enter that customer into the provisioning system? The labor to manage those positions? Since it is conceivable that the answer could be either, we feel that this ambiguity must be removed to the greatest extent possible in order to allow entities to act both in good faith and to get it right.

- b. How should NTIA determine that performance is at an "insufficient level?"

This is a difficult question to answer. We would suggest that performance could be tracked to the timelines and checkpoints mentioned previously. While timelines and milestones may be a valuable check tool, they cannot be taken at exactly face value as certain parts of a project may lag or surge during the entire course of the project. It would seem though, that if the plan is getting so far behind that there is no reasonable method to allow it to catch up, this would be an insufficient level. We feel that a written notification and an "opportunity to cure" should be in place, much as with any other source of funding. We would further suggest that timelines be updated on a quarterly basis to keep the agency informed both as to the status and to any changes in the timelines. This continuous update would both show the progress and the changes that would be needed to keep the project on track to completion. We would further suggest that "Force Majeure" events be added into the timeline even though it might extend the project beyond its intended completion date. Since these acts are not controllable by either party, we do not feel that it should count toward the "insufficient level" discussed herein.

- c. If such spending is detected, what actions should NTIA take to ensure effective use of investments made and remaining funding?

We believe that the first step would be to work with the entity to determine the reason for the variation or the non-compliance. Since this will be a program with very strict timelines, there could be many reasons for the non-compliance from a simple oversight of a small amount to timeline issues to willful disregard or outright fraud. If the grantee is not capable of changing the process or redressing the damage created during a reasonable cure period, their funding should be revoked and reissued to an entity that can follow the rules and requirements of the program.

## ***Topic 12. Coordination with USDA's Broadband Grant Program:***

The Recovery Act directs USDA's Rural Development Office to distribute \$2.5 billion dollars in loans, loan guarantees, and grants for broadband deployment. The stated focus of the USDA's program is economic development in rural areas. NTIA has broad authority in its grant program to award grants throughout the United States. Although the two programs have different statutory structures, the programs have many similar purposes, namely the promotion of economic development based on deployment of broadband service and technologies.

### **a. What specific programmatic elements should both agencies adopt**

to ensure that grant funds are utilized in the most effective and efficient manner?

We feel that it would be a good idea to adopt application processes that are as similar as possible. We fully realize that there are portions of each agency's fiat that are unique to themselves but overall, there is a lot more that is similar than dissimilar. We feel that a uniform application process has many benefits and few drawbacks. The applicants benefit from a more common interface. The agencies and the government benefit from less forms and rules and a cross trained work force. The public benefits by only having to create and enforce one set of forms and rules. This should save taxpayer dollars making a more efficient and usable system. This model may also lay the groundwork for the future national broadband plan. By working together, the agencies involved and the FCC may be able to begin planning with a longer time horizon so that if and when the national broadband plan is implemented, there would be a history of inter-agency cooperation and trust.

### **b. In cases where proposals encompass both rural and non-rural areas,**

what programmatic elements should the agencies establish to ensure that worthy projects are funded by one or both programs in the most cost effective manner without unjustly enriching the applicant(s)?

We are unsure of the definition of "unjust enrichment". We believe that to mean that projects get more funding than what they cost. If the agencies are working together, there should not be a problem of applicants getting paid twice for the same project which would undoubtedly result in unjust enrichment as well as be a waste of funds.

Broadband deployment is not the same as other infrastructures. It is more like a road. Pieces need to be connected and interconnected in a smooth and rational manner. It would serve no purpose to build the best broadband system in the world if there were no middle mile or long haul capabilities. It would be analogous to building a beautiful bridge over a river but having a deer track as the only means of reaching it. Even though the bridge would be able to let the largest truck pass, there is no way for the truck to get there. Likewise, if there is only a walk bridge, the road is unavailable to get locally from one side of the river to the other. This is what happens with middle or long haul availability and no or inadequate local networks, often referred to as "last mile". All pieces need to be available and work in an interconnected way. While middle and long backhaul may be a problem, it is more often from high cost facilities (by tariff) rather than from lack of facilities although there are areas that do lack in such facilities.

The point of this rather long narrative is to make sure that the forest is not missed because of the individual trees that are directly being viewed. To make a fully connected community or area, the towns, the rural, the remote, and the urban, within an area all need to be connected to the network. Anything less creates an inefficient network that has multiple parts, some sustainable and others that cannot be sustained. However, if the entire area is covered, both rural and non-rural, the various portions will work together to make a viable, sustainable system that has the best coverage and the best technical specifications for all. We feel that all parts of an area must be connected to ensure both coverage and viability and that “unjust enrichment” based on any other measurement than “double dipping” is probably an erroneous concept.

### ***Topic 13. Definitions:***

The Conference Report on the Recovery Act states that NTIA should consult with the FCC on defining the terms “unserved area,” “underserved area,” and “broadband.” The Recovery Act also requires that NTIA shall, in coordination with the FCC, publish nondiscrimination and network interconnection obligations that shall be contractual conditions of grant awards, including, at a minimum, adherence to the principles contained in the FCC’s broadband policy statement (FCC 05-15, adopted August 5, 2005).

#### **a. Defining terms “unserved area” and “underserved area”**

For purposes of the BTOP, how should NTIA, in consultation with the FCC, define the terms “unserved area” and “underserved area?”

It seems that everyone has a definition of unserved and underserved these days. We are no different. We believe that an “unserved area” is very clear. There is not any meaningful broadband available. It is very difficult to put a speed to what this means as speeds keep changing. If the threshold is set too low, many areas will be excluded. If the threshold is set too high, all areas will be included making the definition meaningless. However, all definitions do have a speed in them. The old FCC and RUS bar of 200kbps eliminated ISDN and IDSL as well as most satellite from the definition of broadband. However, this definition had not changed in over a decade. During that period of time, normal deployment speeds have increased from 128-256kbps to normal delivery speeds of 1.5 to 6 to 12 megabits and even higher. While this will not allow us to choose a precise number, it does give us an idea that it should not be set at the lowest nor should it be set at the highest. We would recommend that some rate higher than 1.544 and lower than 6.176 be chosen. This corresponds to the FCC definition of Tier 3 and Tier 4 Broadband. We believe that an area that does not have access to tier 3 broadband is effectively unserved. Yes, that will eliminate T1s just as ISDN or IDSL was eliminated by the old definition. However, bonded T1s are a viable delivery mechanism of copper telephony systems if the provider wants to provide the service. This would also eliminate one of our favorite quick methods of getting broadband way out on the copper called MVL, a nonstandard subset of ADSL. While it is undeniable that 640k or even 256k is better than dial up, it is also undeniable that those speeds are not able to provide the rich modern broadband experience. Also, just like the old definition, there are technologies to replace the technologies that do not scale to modern standards as a broadband mechanism. We do not feel that the upload speed needs to be addressed here but if it should be, we do not feel that it should be set

higher than 2 Megabits and we do not feel that a symmetrical system should be a requirement as it would eliminate most wireless and many forms of DSL. We feel that areas with large amounts of unserved area constitute an unserved area since these portions of an area will undoubtedly be the most difficult to reach and also the most difficult to make a viable sustainable business plan. With that information in mind, an **“Unserved area is defined as any area constituted by a franchise area, a wire center, or a civil boundary smaller than a state, or a contiguous combinations of these areas that has one or more of the following conditions: 1) greater than 50% of the area in question does not have access to meaningful broadband as described above, 2) greater than 20% of the area in question does not have access to meaningful broadband and this 20% of the area is broken into two or more non-contiguous areas.”**

“Underserved area” provides a much larger challenge than unserved. While it is relatively easy to determine if a service is available in an area and what that service costs, it is much more difficult to determine how wide reaching that service is. We are headquartered in a small town of 22,000. This town has both cable and copper systems available within the boundaries of the town. Some of the plant is old and cannot support any broadband, some can support pretty fair broadband. Some places do not have cable availability but most do. If everyone is not served, is that underserved? If the speeds are not there in all places, is that underserved? If there is only one or two providers, is that underserved? If the cost, either absolute, or in price per megabit is too high, is that underserved? If the areas surrounding that town does not have broadband available, does that make the entire area underserved? We believe that any and all of these factors contribute to underserved. With that in mind, we would propose the following definition. **“Underserved is any area constituted by a franchise area, a wire center, or a civil boundary smaller than a state, or a contiguous combinations of these areas, that has one or more of the following conditions: 1) There are locations in the area that do not have access to broadband (either as defined above or in the form adopted by NTIA and or RUS), 2) there are locations in the area that do not have access to at least 2 providers, 3) there are locations in the area that do not have at least one quarter of the broadband speed available as other portions of the area, 4) the average retail entry price is more than 140% greater than the average of the state or region or the price per megabit is greater than 150% of the average price of surrounding areas.”**

b. How should the BTOP define “broadband service?”

1) *Should the BTOP establish threshold transmission speeds*

for purposes of analyzing whether an area is “unserved” or “underserved” and prioritizing grant awards? Should thresholds be rigid or flexible?

As mentioned under the response to 13.a, we feel that a rate lower than between 1.6 and 3 Megabits down and 1 Megabit up is the equivalent of being unserved in today’s environment. Under this same heading, we gave a definition of underserved that does not have a precise speed measurement but rather a definition that gives a relatively broad array of conditions that are reasonably easy to ascertain that would identify an “underserved” area. One of those conditions is an absence of broadband either as defined in the section or as it might be defined by NTIA and or RUS.

We believe that there must be some threshold set to that will identify what the current lower limit of speed is qualified to be broadband. We also feel that since speed is one of the criteria mentioned in the act, specifically that higher speed is desirable, that additional points should be scored by applications that are both capable of higher speeds and that plan to offer higher speeds.

2) *Should the BTOP establish different threshold speeds for different technology platforms?*

This would seem to be a question that can have only one answer. No. If there were differing speed thresholds determined for differing technologies, the selection process would no longer be technology neutral, but rather, the criteria would favor one or another of the competing technologies. While we believe that broadband speeds are going to continue to increase into the foreseeable future, that is not a part of either the selection criteria nor the ranking requirements. We do believe that the selection criteria should be set at a threshold that does not eliminate essential current service providers such as WISP or traditional ISPs nor should it preclude any other provider that can provision service at whatever rate is considered a meaningful broadband speed.

3) *What should any such threshold speed(s) be, and how should they be measured and evaluated*

(e.g., advertised speed, average speed, typical speed, maximum speed)?

There are several points to this question and we would like to make sure that we do justice to each of them. First, threshold speed needs to be included in the definition of what is “unserved”. This threshold speed is simply the minimum level that must be established to be called broadband. This definition will ultimately be used to define whether an area is unserved and whether a prospective project is actually providing broadband. This threshold could and possibly should have various portions. The idea of advertised speed, average speed, typical speed, and maximum speed all have different values and there are even various ways to measure the speeds in the context of each of the categories listed. We would like to take each speed and provide our thoughts.

Advertised Speed - This is a nearly worthless definition unless it is backed up by some type of actual speed validation or statistics.

Average Speed - Average speed can be measured in many ways. It can be the mean, median, or mode. It can be defined as the speed that traffic can achieve 95% of the time. This speed is a more realistic measurement than advertised speed but we feel that there are better measurements.

Maximum speed – almost as worthless as advertised speed. This speed may be obtained only a small percentage of the time, thereby rendering it all but useless as a tool to measure real speed and throughput.

Typical Speed - This has some of the same drawbacks mentioned above. The typical speed will be available at many times of the day or night but will not normally be available during normal periods of heavy network usage.

Average Peak Busy Hour Speed - While this is certainly a harder measurement to quantify, it is not impossible. Peak usage is easily obtainable through either purchased software or through free monitoring software. Once a peak hour is obtained, it is possible to see what the average percentage of network utilization is being realized. If the network is fully utilized or overloaded, testing can be done to determine the average throughput or statistical models can be used to determine the same information from the physical

characteristics of the network, the bandwidth available, the bandwidth being utilized, the total number of customers, and the number of customers currently connected sending traffic. If the network is running below capacity during the Peak Busy Hour, there will not be any congestion which will allow all or at least the majority of traffic to run at its connection speed unless traffic shaping is taking place. If traffic shaping is taking place to limit some or all types of traffic during the period(s) being measured, the shaping will regulate the speed and this can be reported.

The second point of this question would appear to be what speed and which definition should it be coupled with? We would suggest that the threshold speed should be somewhere between 1.6 and 3 down and 1 down. These speeds are obtainable by most types of broadband delivery technologies. In fact, if they are not, we would contend that they are not really current broadband delivery technologies but rather historical remnants much like automobiles that can not exceed 15 miles per hour. While at one time that was an acceptable car, that time is long gone. Was it a car? Yes. Would it still be considered to be a viable salable car today? No.

The third point is at where do you measure the speed at? We would contend that there are at least two points that need to be measured. One is speed that is realized from the service location to the central office router or concentrator for the area. This must not be a remote field point but rather a central office core location. This is the average speed on net. The second point to measure would be at the gateway router to the internet, leaving the internal network that is controlled by the provider to traverse other network providers. This point needs to have a contention and or congestion measurement to validate that it is actually allowing traffic to traverse it at the same speeds that are being relayed from the owned network. These two items together either expedite the packet throughput or regulate the packet throughput depending on combination of the proffered speeds and the total throughput available. While this in and of itself does not completely regulate the speed of up or downloads, it is the only part that is actually under the control of the provider.

#### *4) Should the threshold speeds be symmetrical or asymmetrical?*

Since there is no inherent benefit accruing to symmetrical or asymmetrical architectures, we do not feel that a symmetrical structure should be mandated. It is traditionally used as a proxy to separate residential and business traffic and to provide differentiation that is only partly based on speed but also throughput, latency, uptime, and many other factors.

#### *5) Shared Facilities and Network Congestion*

How should the BTOP consider the impacts of the use of shared facilities by service providers and of network congestion?

At some point, all facilities are shared. If the speed is measured both from the service point to the central office and then the throughput is measured at the router in that office and or at the core exit from the network, the speed and congestion will become apparent. The impact will be in slower Peak Busy Hour speeds that will leave customers upset with the slower than expected speed. The speed and congestion should be part of a scoring mechanism, not because it happens but rather to what extent does it impact the experience and slow speed.

c. How should the BTOP define the nondiscrimination and network interconnection obligations

that will be contractual conditions of grants awarded under Section 6001?

1) *In defining nondiscrimination obligations,*

what elements of network management techniques to be used by grantees, if any, should be described and permitted as a condition of any grant?

We feel that network management is a series of choices that should be made by each provider to make the network work better for all. Traffic shaping, packet inspection, and traffic interdiction as it applies to various forms of malware are all recognized as viable and logical forms of network management. We do not feel that there should be many if any conditions levied here except for the basics of non-discriminatory traffic delivery based upon class of service sold subject to provider and customer agreements.

2) *What Should the Interconnection Obligation be?*

Should the network interconnection obligation be based on existing statutory schemes? If not, what should the interconnection obligation be?

It is unclear to us what this question is asking. If this is a question of interconnection to other networks, that is what the internet is by definition, a network of networks. If this is a question about usage of network elements or the usage of the network by another provider, we do not have an answer to that at this time. Since the wording does not appear to require open network architecture, we feel that to comment on that would be beyond the scope of this question even though we do provide an open network for other companies to “ride” across to their customers.

3) *Should there be different standards for different technologies?*

Should there be different nondiscrimination and network interconnection standards for different technology platforms?

We do not understand why anyone would want the difficulties that would ensue from having separate standards. We do not see what point could be solved by having different standards. We do understand that there are different realities of network element usage if a network is open but again, we do not think that is where this question is going.

4) *Should failure to abide by whatever obligations are established result in de-obligation of fund awards?*

This would seem to not only be reasonable but required after a notice of failure and a reasonable period to resolve the problem.

5) *Should Obligations Extend Beyond the Life of the Grant*

In the case of infrastructure paid for in whole or part by grant funds, should the obligations extend beyond the life of the grant and attach for the useable life of the infrastructure?

We believe that attaching obligations for too long a period of time would probably invalidate the obligations over a long period of time, especially if ownership changes.



What we would suggest instead is that the obligations of the grant extend for a fixed period of time beyond the two years of the grant and construction period. We would suggest that these conditions extend to at least three additional years after the end of the grant period.

d. Definition of Other Terms

Are there other terms in this section of the Recovery Act, such as "community anchor institutions," that NTIA should define to ensure the success of the grant program? If so, what are those terms and how should those terms be defined, given the stated purposes of the Recovery Act?

We believe that the more pieces of the program that are defined before beginning, the better the chances of success. A "community anchor institution" could be defined as any medical facility, educational facility, community organization, or government entity that is in need of broadband for the betterment of the community and the people that live there. Since there are many communities that do not have these types of institutions, the lack thereof should not hurt an applicants chances for approval of their project or the awarding of a grant or loan.

e. What role, if any, should retail price play in these definitions?

We do not feel that retail price should be a large part of this process. We do feel that the grant programs should not allow predatory pricing to be adopted by grant recipients where they are in a competitive situation. There certainly could be some price constraints applied to the granted projects but in general, this would seem to be more of a problem tracking and enforcing than any possible gain from it. If planned retail price is out of line with the area, that fact should be part of the sustainable and viability portion of the project.

***Topic 14. Measuring the Success of the BTOP:***

The Recovery Act permits NTIA to establish additional reporting and information requirements for any recipient of grant program funds.

a. What measurements can be used to

determine whether an individual proposal has successfully complied with the statutory obligations and project timelines?

Quarterly reports can be utilized to provide a synopsis of the project, where it is, how it is proceeding, problems encountered, milestone hit, quantity of construction, and even customer sales, installations, and network growth. These quarterly updates could also contain a timeline update that can measure and compare the completion progress measured against the projects initial and subsequent projections.

b. Should applicants be required to report on a set of common data elements

so that the relative success of individual proposals may be measured? If so, what should those elements be?

Jaguar believes that common reporting elements would make it much easier for NTIA and RUS to monitor the progress of the applicants and their projects. These elements could include a physical build report including the construction completed and the people

employed directly or through a contractor or vendor on this project, new customer sales, new customer hookups, anchor institutions hooked up, speeds provided, and whatever other metrics would be deemed useful during the construction period.

***Topic 15. Please provide comment on any other issues:***

that NTIA should consider in creating BTOP within the confines of the statutory structure established by the Recovery Act.

Currently, Jaguar has no other comments.

## **RUS**

The provisions regarding the RUS Recovery Act broadband grant and loan activities are found in Division A, title I under the heading Rural Utilities Service, Distance Learning, Telemedicine and Broadband Program of the Recovery Act.

The text of this authority is as follows:

DISTANCE LEARNING, TELEMEDICINE, AND BROADBAND PROGRAM For an additional amount for the cost of broadband loans and loan guarantees, as authorized by the Rural electrification Act of 1936 (7 U.S.C. 901 et seq.) and for grants (including for technical assistance), \$2,500,000,000: Provided, That the cost of direct and guaranteed loans shall be as defined in section 502 of the Congressional Budget Act of 1974: Provided further, That, notwithstanding title VI of the Rural Electrification Act of 1936, this amount is available for grants, loans and loan guarantees for broadband infrastructure in any area of the United States: Provided further, That at least 75 percent of the area to be served by a project receiving funds from such grants, loans or loan guarantees shall be in a rural area without sufficient access to high speed broadband service to facilitate rural economic development, as determined by the Secretary of Agriculture: Provided further, That priority for awarding such funds shall be given to project applications for broadband systems that will deliver end users a choice of more than one service provider: Provided further, That priority for awarding funds made available under this paragraph shall be given to projects that provide service to the highest proportion of rural residents that do not have access to broadband service: Provided further, That priority shall be given for project applications from borrowers or former borrowers under title II of the Rural Electrification Act of 1936 and for project applications that include such borrowers or former borrowers: Provided further, That priority for awarding such funds shall be given to project applications that demonstrate that, if the application is approved, all project elements will be fully funded: Provided further, That priority for awarding such funds shall be given to project applications for activities that can be completed if the requested funds are provided: Provided further, That priority for awarding such funds shall be given to activities that can commence promptly following approval: Provided further, That no area of a project funded with amounts made available under this paragraph may receive funding to provide

broadband service under the Broadband Technology Opportunities Program: Provided further, That the Secretary shall submit a report on planned spending and actual obligations describing the use of these funds not later than 90 days after the date of enactment of this Act, and quarterly thereafter until all funds are obligated, to the Committees on Appropriations of the House of Representatives and the Senate.

***Topic 14(1). What are the most effective ways RUS could offer broadband funds to ensure that rural residents that lack access to broadband will receive it?***

For a number of years, RUS has struggled to find an effective way to use the Agency's current broadband loan program to provide broadband access to rural residents that lack such access. RUS believes that the authority to provide grants as well as loans will give it the tools necessary to achieve that goal. RUS is looking for suggestions as to the best ways to:

a. Bundle loan and grant funding options

to ensure such access is provided in the projects funded under the Recovery Act to areas that could not traditionally afford the investment;

This is an interesting topic that could have several answers. We at Jaguar believe that the best way to utilize these options is to provide baseline 80% or 90% grants with the balance of funding coming from the private sector if it is available. If it is unavailable, (this could be shown by rejection letters from banks, capital investment firms, bond underwriters, etc) then RUS could package the grant with either a loan or a loan guarantee to ensure that the plan is completely funded. This would allow RUS to ensure that projects would get funded even in areas that could not traditionally afford the investment. It would also allow RUS to make sure that its mandate to utilize the money efficiently within a short time frame could be a reality. These guarantees could also be used to guarantee private funding mechanisms for rural NTIA grants, thereby allowing the agencies to work together fulfilling their separate objectives and mandates.

b. Promote leveraging of Recovery Act funding with private investment that ensures project viability and future sustainability;

We believe that this could be done through a private loan guarantee that would be used in conjunction with grant funding. We believe that these relationships would be possible with the grant and loan structures that could be used. Furthermore, we believe that once these capital relationships are in place, it will be easier to draw on the private resource market in the future.

c. Ensure that Recovery Funding is targeted to unserved areas that stand to benefit the most from this funding opportunity.

Utilizing the definition of unserved in topic 13(a), and combining that with the 75% rural requirement, funding can be targeted to areas that will best meet the requirements of the program. Further requirements that target projects that have more than one service provider could be included in this definition, especially if they run a network that have multiple providers on the same physical network as long as all providers are treated in a fair and consistent way uniformly across the network. We believe that the term “without

sufficient access to high speed broadband service to facilitate rural economic development, as determined by the Secretary of Agriculture” needs to be defined here. We have suggested in prior portions of this treatise that the FCC definitions of “Broadband Tier 3” (3-6 megabits) or “Broadband Tier 4” (6-10 megabits) could be a benchmark for both unserved and underserved definitions. This FCC definition could also be used for the speed that would be used to determine if there would be facilitation of rural economic development.

***Topic 15(2). In what ways can RUS and NTIA best align their Recovery Act broadband activities to make the most efficient and effective use of the Recovery Act broadband funds?***

In the Recovery Act, Congress provided funding and authorities to both RUS and the NTIA to expand the development of broadband throughout the country. Taking into account the authorities and limitations provided in the Recovery Act, RUS is looking for suggestions as to how both agencies can conduct their Recovery Act broadband activities so as to foster effective broadband development. For instance:

a. Reconciliation of Terms and Definitions

RUS is charged with ensuring that 75 percent of the area is rural and without sufficient access needed for economic development. How should this definition be reconciled with the NTIA definitions of “unserved” and “underserved?”

We believe that the definitions provided in topic 13(a) to NTIA and reiterated under topic 14 could be utilized to reconcile the definitions of “unserved” and “underserved.” The current definition used by RUS for rural seems to be working well and we see no need to change it from its current wording. The 75% instead of 100% requirement for rural now allows for some area to be considered non rural which will allow projects to cover full contiguous areas in a more efficient manner.

b. Eligibility Requirements, Non Duplication, and Multi-Agency Applications

How should the agencies structure their eligibility requirements and other programmatic elements to ensure that applicants that desire to seek funding from both agencies (i) do not receive duplicate resources and (ii) are not hampered in their ability to apply for funds from both agencies?

All applicants should be required to list any other applications on their current application and include a brief description of the area covered and if it is in-process, approved, or rejected. When additional applications are submitted, all prior applications that are in-process would need to be updated with the same information. All approved awards for an area should be posted on a public website. The minimum information here should include the applicant, the type of broadband, the agency that approved the project and approval dates. Prior to issuing approvals for an area, this site should be checked. This site would also be monitored by the general public. Lastly, there should be a statement, that states that there are no funds being received from the other agency for the same project. This statement should have a felony fraud liability if the statement is certified falsely.

If there is an application submitted to both agencies for the same project, at the time of approval from one agency, the applicant shall notify the other agency that their application needs to be withdrawn. If a portion of the application is approved, only that portion of the project that was approved would need to be withdrawn.

***Topic 16(3). How should RUS evaluate whether a particular level of broadband access and service is needed to facilitate economic development?***

Seventy-five percent of an area to be funded under the Recovery Act must be in an area that USDA determines lacks sufficient “high speed broadband service to facilitate rural economic development.” RUS is seeking suggestions as to the factors it should use to make such determinations.

a. How should RUS define “rural economic development?”

What factors should be considered, in terms of job growth, sustainability, and other economic and socio-economic benefits?

Jaguar believes that the definitions referred to in Topic 13(a) and 15(2)(a) should be sufficient to determine whether rural economic development can be achieved or not. We are not sure that it is necessary to define “rural economic development” as that is not mandated under the act but rather that the phrase “without sufficient access to high speed broadband service to facilitate rural economic development, as determined by the Secretary of Agriculture” needs to have the definition. In other words, what speed is consistent with providing opportunities for rural economic development? Under the terms of the ARRA, there are clear goals of stimulating the economy by putting people to work, timely execution of the project, and continuing viability and sustainability. A definition of “rural economic development” might include many factors including the ones mentioned above. The difficulty is measuring any of these items until long after the fact.

b. What speeds are needed to facilitate “economic development?”

We believe that the speeds referenced in previous Topic 13(a) that are used in the definitions of unserved and underserved areas are the current speeds required. These are consistent with the FCC definitions of Tier 3 (3-6 Megabits) and Tier 4 (6-10 Megabits) broadband. We feel that anything less than this will put the rural communities covered by these projects at a significant disadvantage both currently and in the future. We also feel it is important to the future economic development of an area for a technology to be speed upgradeable with technologies like WI-Max wireless and various Fiber to the Premise technologies.

c. What does “high speed broadband service” mean?

Jaguar’s definition: **“High speed broadband service is defined as a data service that has normal continuous sustainable speeds in the 3-10 megabit range or higher and maintains 3-10 megabits at the 95<sup>th</sup> percentile level even during the Peak Busy Hour(s).”** This speed is consistent with Tier 3 (3-6 megabits) and Tier 4 (6-10 megabits) Since the bulk if not all, wireless technologies today have difficulty delivering in the Tier 4 range in a cost effective manner, we would suggest that wireless be defined at Tier 3 while

wired be defined at Tier 4. People have shown over time that they are willing to accept less from a wireless provider (cell phones both voice and data packages).

d. What factors should be considered, when creating economic development incentives, in constructing facilities in areas outside the seventy-five percent area that is rural

(i.e., within an area that is less than 25 percent rural)?

We are not sure we understand the id est reference nor are we entirely sure what economic development incentives are being discussed. What we believe that you are asking is what types of economic development factors are important to evaluate under the loan program. To that end, we will answer that question. We believe that job creation is one of the most if not the most important goal of the ARRA. We also believe that providing a high speed broadband network is mandated by specific portions of the act. Therefore, we believe that things that can be measured like jobs created, jobs that continue after the stimulus, economic viability and sustainability of the project, speed of the proposed projects, inclusion of all end user entities in an area, as well as things that are more difficult to measure, such as the continuing economic impact of the investment or the “green-ness” of the project, should all be used and factored to the extent practicable. Applicants should be able to provide most of this information in their applications. The long term effects are generally available from different studies that have been published by groups like Pew Research and other neutral groups.

***Topic 17(4). Further Project Evaluation:***

In further evaluating projects, RUS must consider the priorities listed below. Priorities have been assigned to projects that will: (1) Give end-users a choice of Internet service providers, (2) serve the highest proportion of rural residents that lack access to broadband service, (3) be projects of current and former RUS borrowers, and (4) be fully funded and ready to start once they receive funding under the Recovery Act.

a. What value should be assigned to those factors in selecting applications?

We feel that these criteria are all valuable. Each of these criteria should be included in the grant scoring mechanism. The program should be careful to have two distinct portions, the initial gating of applications, in other words, the bare minimums must be defined clearly and precisely in order to alleviate any confusion and to save time for the agency reviews. The second portion of the scoring should be done on a scoring system that takes into account all of the differing requirements and intents of the act. Since there are several competing directives, it may not be possible for any application to score 100% but that should be acceptable. Rather than trying to make scorecards that can be perfect, it would be preferable to make scorecards that can accurately rank projects and fund the projects that best meet the agencies goals.

b. What additional priorities should be considered by RUS?

We believe that there should be some allocation of points for a narrative portion of the application. This narrative can be used to “fill in the blanks” about an application and why it should be chosen. This will allow projects with unique standards and new methodology to explain that and reap the reward for “innovation”. It will also allow more traditional applicants a way to tell the story about what it will mean to their community, to allow them to present the information that they feel is important, even if it does not fall directly under one of the other scoring mechanisms. This will allow some flexibility on grading which makes it harder on the scoring agency, but this can be somewhat moderated by a lower point total being awarded to the narrative.

***Topic 18(5). Benchmarks of Success***

a. What benchmarks should RUS use to determine the success of its Recovery Act broadband activities?

The Recovery Act gives RUS new tools to expand the availability of broadband in rural America. RUS is seeking suggestions regarding how it can measure the effectiveness of its funding programs under the Recovery Act. Factors to consider, include, but are not limited to:

- a. Businesses and residences with “first-time” access.
- b. Critical facilities provided new and/or improved service:
- c. Educational institutions.
- d. Healthcare providers.
- e. Public service/safety.
- f. Businesses created or saved.
- g. Job retention and/or creation.
- h. Decline in unemployment rates.
- i. State, local, community support.

Many of these items are seeking to focus on short term gains and we do not see a problem with that. We would also add broadband penetration levels, cost per megabit of access, increasing offered and taken speeds as well as increased coverage areas. All of the aforementioned factors could be involved in scoring or measuring success. However, we do not know how to break down the individual categories listed into some type of formula. There are also longer term measurements like education level improvements, high school graduation rates, increased income levels, and a general population growth or stabilization that could be utilized to score the success of the projects.

We would suggest that many of the answers to the success of the ARRA act as it relates to broadband will not be measurable until well into the future. The items listed, as well as other short term measurements that may be suggested by other commentators, may have to suffice in the short term since long term benefits will not be realized until that longer term time frame arrives.

## **Conclusion**

In conclusion, Jaguar would like to thank the Department of Commerce, the NTIA, and RUS for the chance to comment on what we believe to be a historic event. While this is only the beginning of national broadband coverage, it is a beginning. One that is long overdue. We are pleased to be a part of the process and we hope to be part of the solution.



## Appendix A Sample Scoring

Since each agency has a slightly different mandate, the scoring system proposed for each is also slightly different. To the extent practicable, the scoring system is the same. While we believe that an objective scoring system makes the most sense, there will always be some portions of a project that remain subjective. These subjective portions may need to be scored in some type of narrative. If a narrative is part of the scoring, we would urge you to include as much guidance as possible so good projects do not get lost simply because technical people, especially in small service providers are not English nor communications majors.

### **NTIA**

Up to 30 Points for Economic Development (including Speed to Construction)

- 20 points for Job Creation
- 5 points for general economic development including interaction with local government and anchor institutions
- 3 points for letters of support from at least 50% of local governments and Community anchor institutions or a joint Public Private Partnership
- 3 points for time to begin project
- 2 points for ratio of time to complete project

Up to 20 Points for Some combination of Service Level and greatest number of people serviced

- 10 points for an area that is completely unserved or underserved
- 8 points for more than 50% of the area unserved or underserved
- 5 points for more than 25% of the area unserved or underserved
- 0 points for less than 25% Unserved or Underserved
- 10 Points awarded as a ratio that measures the cost per home passed. An example might be as follows.  
0 Points if the cost is over 4000 per home passed or covered in the service area  
2 Points if the cost is between 3000 and 4000 per house passed or covered  
4 Points if the cost is between 2000 and 3000 per house passed or covered  
5 Points if the cost is between 1500 and 2000 per house passed or covered  
6 Points if the cost is between 1000 and 1500 per house passed or covered  
8 Points if the cost is between 500 and 1000 per house passed or covered  
10 Points if the cost is less than 500 per house passed or covered.
- To balance out the high cost of a rural area, the ratio of rural area covered vs. the total area covered expressed as a decimal between 0 and 1 multiplied by 5 would be added to those rural loans with the total not to exceed 10 points.

Up to 15 Points for the Narrative

- This would be the location for any special criteria and any detail that was deemed appropriate from the applicant.
- Up to 5 points (one point per use of the network) as described in the narrative Topic 1(a) to 1(e))
- Up to 5 points (one point per institution or group provided for as defined in topic 1(a))

- Up to 5 points on freeform narrative

Up to 15 Points for Network Speed

- 10 Points for speeds defined as Broadband Tier 4 or higher by the FCC 6-10 Megabits or greater
- 8 Points for speeds defined as Broadband Tier 3 by the FCC 3-6 Megabits
- 5 Points for speeds defined as Broadband Tier 2 by the FCC 1.5-3 Megabits
- 3 Points for speeds defined as Basic Broadband by the FCC 768 kilobits to 1.5 Megabits
- 1 Point for speeds defined as First Generation data 200-768 kilobits
- An additional value of 5 points shall be available if all areas in the coverage area have access to the same speed

Up to 15 Points for Network knowledge and history combines with Continuing Financial Viability

- 10 points for management knowledge and track history of broadband projects
- 5 points for a viable continued Pro Forma and business plan

Up to 5 Points for Open Network and Interconnection Obligations

- 2 points for agreeing and adhering to all Interconnection Obligations
- 3 points for operating an open IP data network

3 bonus points for Economically or Socially Challenged Business as defined.

## ***RUS***

Up to 30 Points for Economic Development (including Speed to Construction)

- 20 points for Job Creation
- 5 points for general economic development including interaction with local government and anchor institutions
- 3 points for letters of support from at least 50% of local governments and Community anchor institutions or a joint Public Private Partnership
- 3 points for time to begin project
- 2 points for ratio of time to complete project

Up to 20 Points for Some combination of Service Level and greatest number of people serviced

- 10 points for an area that is completely unserved or underserved
- 8 points for more than 50% of the area unserved or underserved
- 5 points for more than 25% of the area unserved or underserved
- 0 points for less than 25% Unserved or Underserved
- 10 Points awarded as a ratio that measures the cost per home passed. An example might be as follows.  
 0 Points if the cost is over 4000 per home passed or covered in the service area  
 2 Points if the cost is between 3000 and 4000 per house passed or covered  
 4 Points if the cost is between 2000 and 3000 per house passed or covered  
 5 Points if the cost is between 1500 and 2000 per house passed or covered  
 6 Points if the cost is between 1000 and 1500 per house passed or covered  
 8 Points if the cost is between 500 and 1000 per house passed or covered

10 Points if the cost is less than 500 per house passed or covered.

- To balance out the high cost of a rural area, the ratio of rural area covered vs. the total area covered expressed as a decimal between 0 and 1 multiplied by 5 would be added to those rural loans with the total not to exceed 10 points.

Up to 15 Points for the Narrative

- This would be the location for any special criteria and any detail that was deemed appropriate from the applicant.
- Up to 5 points (one point per use of the network as described in the narrative Topic 1(a) to 1(e))
- Up to 5 points (one point per institution or group provided for as defined in topic 1(a))
- Up to 5 points on freeform narrative

Up to 15 Points for Network Speed

- 10 Points for speeds defined as Broadband Tier 4 or higher by the FCC 6-10 Megabits or greater
- 8 Points for speeds defined as Broadband Tier 3 by the FCC 3-6 Megabits
- 5 Points for speeds defined as Broadband Tier 2 by the FCC 1.5-3 Megabits
- 3 Points for speeds defined as Basic Broadband by the FCC 768 Kilobits to 1.5 Megabits
- 1 Point for speeds defined as First Generation data 200-768 kilobits
- An additional value of 5 points shall be available if all areas in the coverage area have access to the same speed

Up to 15 Points for Network knowledge and history combines with Continuing Financial Viability

- 10 points for management knowledge and track history of broadband projects
- 5 points for a viable continued Pro Forma and business plan

Up to 5 Points for Open Network and Interconnection Obligations

- 2 points for agreeing and adhering to all Interconnection Obligations
- 3 points for operating an open IP data network

Up to 5 Points for Rurality

- 0 points for average density over 25 per square mile
- 1 point for average density under 25 per square mile
- 2 points for average density under 20 per square mile
- 3 Points for average density under 15 per square mile
- 4 Points for average density under 10 per square mile
- 5 Points for average density under 5 per square mile

10 Points for Previous or Current RUS borrower under any Telecommunications or Broadband program